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- 3. Revised version received (14-12-2018)
- 4. Paper accepted for publication (18-12-2018)
- 5. Available online: (19-12-2018)

Bartos András

Feladó:	János Móczó <jmoczo@mail.bme.hu></jmoczo@mail.bme.hu>
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Tárgy:	Fwd: Invitation to revise manuscript EUROPOL_2018_1955

------ Forwarded message ------From: Julius Vancso (European Polymer Journal) <<u>EviseSupport@elsevier.com</u>> Date: 2018. dec. 5., Sze 16:13 Subject: Invitation to revise manuscript EUROPOL_2018_1955 To: <<u>jmoczo@mail.bme.hu</u>>

Ref: EUROPOL_2018_1955 Title: DEFORMATION AND FAILURE OF SUGARCANE BAGASSE REINFORCED PP Journal: European Polymer Journal

Dear Dr. Moczo,

Thank you for submitting your manuscript to European Polymer Journal. We have completed the review of your manuscript. A summary is appended below. While revising the paper please consider the reviewers' comments carefully. We look forward to receiving your detailed response and your revised manuscript.

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I look forward to receiving your revised manuscript as soon as possible.

Kind regards,

Professor Vancso Editor European Polymer Journal

Comments from the editors and reviewers: -Reviewer 1

-

In profession, the paper is very well-written and also deals with an interesting topic. The interpretation of the results is correct and it is supported by the research results. The English language in the whole paper is acceptable, only a few misleading expressions were found. My remarks are the following:

- Please give not only the average length and diameter of the fibers (4560 and 340 microns respectively), but also the standard deviation, so one can see how wide the distribution of these values are.

- Instead of using the expression "fibers touch each other", I advise using "the fibers adjoin each other" or "the fibers abut each other"

- Instead of using the expression "goodness of the fit", I suggest using "accuracy of the fit".
- For Fig 2 and 3, same scale should be used (15 to 45 MPa)
- For Fig 6, the vertical axis scale should start from 0 and not 1.

After correcting these very minor errors, the paper can be published in European Polymer Journal.

-Reviewer 2

- The authors investigate the reinforcing potential of bagasse fibres in polypropylene and compare the resulting

composites with ones based on wood fibres. Also, the micromechanical mechanisms are investigated with acoustic emission and other methods, to clarify the effects taking place at the interface while loading these composites.

This paper is very well written, as it is to be expected from the group of Prof. Pukanszky. I have only minor remarks, which need no further reviewing process, as these comments can be adapted and handled by the editorial office.

p4, last paragraph: "One of the advantages of natural fibers is that they are cheap." I agree on that, but you should state here that the cheap fibres are typically such which are produced from residues, as pulped and refined natural fibres are sometimes more expensive than glass fibres.

p6, last paragraph "The Scona TPPP [...] had a melt flow rate of 2-7 g/10 min...". You should point out here that this is the value from the data sheet, and not a measured one.

p11, last paragraph "Quite surprisingly, the differences in particle characteristics is even less visible than in the case of tensile yield stress." Could this be due to a similar aspect ratio after processing? I guess the bagasse fibres will be shortened by the processing, so this could be an influence here.

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Answer

to the comments of the Referees on the manuscript "Deformation and failure of sugarcane bagasse reinforced PP" by Anggono, J., Farkas, Á.E., Bartos, A., Móczó, J., Antoni, Purwaningsih, H. and Pukánszky, B. submitted to Eur. Polym. J. (EUROPOL_2018_1955)

We appreciate the comments of the Referees and their suggestions to improve the quality of the paper. We are glad that both of them found the article reasonable and worth of publication after minor revision. We did our best to modify the manuscript according to their remarks. We took into consideration the remarks during revision wherever it was possible and answered all of the questions and remarks. The answer to the questions of the Reviewers and the modifications carried out are listed below.

Reviewer #1

We are glad that this Referee found that our paper is "very well-written and also deals with an interesting topic, moreover the interpretation of the results is correct and it is supported by the research results". We agreed with most the remarks of this Referee, and accommodated them into the revised manuscript. The questions and suggestions of the Reviewer are listed below and our answers are printed in italic after them.

1. Please give not only the average length and diameter of the fibers (4560 and 340 microns respectively), but also the standard deviation, so one can see how wide the distribution of these values are.

The standard deviation of fiber length and diameter are 1870 and 156 μ m, respectively, and it is given in the revised manuscript now.

2. Instead of using the expression "fibers touch each other", I advise using "the fibers adjoin each other" or "the fibers abut each other"

We modified the text and wrote, "the fibers abut each other" at both places where the expression was used.

3. Instead of using the expression "goodness of the fit", I suggest using "accuracy of the fit".

The text was changed and we used the expression proposed by the Reviewer.

4. For Fig 2 and 3, same scale should be used (15 to 45 MPa)

We do not understand this request of the Reviewer. Two different properties are presented in the two figures, which were determined independently thus we do not see the reason to use the same scale for them. We have not changed the scale of the figure.5. For Fig 6, the vertical axis scale should start from 0 and not 1.

The same applies to this figure. We do not see the benefit of starting the scale from 0. The plot would be compressed and an empty space left in the lower part without supplying any additional information. This figure was not changed either.

Reviewer #2

We are happy that this Referee had the opinion that "the paper is well written". He or she had only three questions/suggestions, which we accommodated into the revised manuscript. The questions and suggestions of the Reviewer are listed below together with our answers:

1. p4, last paragraph: "One of the advantages of natural fibers is that they are cheap." I agree on that, but you should state here that the cheap fibres are typically such which are produced from residues, as pulped and refined natural fibres are sometimes more expensive than glass fibres.

We agree with the Reviewer completely. We modified the text to indicate that natural fibers can be cheap especially in cases, when they are obtained from local sources and produced from waste.

- p6, last paragraph "The Scona TPPP [...] had a melt flow rate of 2-7 g/10 min...". You should point out here that this is the value from the data sheet, and not a measured one. We modified the text according to the suggestion of the Referee and indicated that both the MFI value and the MA content of MAPP was taken from the data sheet of the producer.
- 3. p11, last paragraph "Quite surprisingly, the differences in particle characteristics is even less visible than in the case of tensile yield stress." Could this be due to a similar aspect ratio after processing? I guess the bagasse fibres will be shortened by the processing, so this could be an influence here.

The Referee might be right that fiber attrition may had led to similar aspect ratios resulting in similar properties. We do not have sufficient information to verify this assumption or deny it. Another possibility is that the large size of both fibers leads to early debonding resulting in premature failure and decreased strength. We modified the text and offered both tentative explanations in the revised manuscript. We must check the validity of the statements later by carrying out additional experiments.

Bartos András

Feladó:Móczó János DrKüldve:hétfő 2023. június 26 12:31Címzett:Andras Bartos; Bartos AndrásTárgy:Fw: Your manuscript EUROPOL_2018_1955_R1 has been accepted

Feladó: Julius Vancso (European Polymer Journal) <EviseSupport@elsevier.com> Elküldve: 2018. december 18., kedd 19:19 Címzett: jmoczo@mail.bme.hu <jmoczo@mail.bme.hu> Tárgy: Your manuscript EUROPOL_2018_1955_R1 has been accepted

Ref: EUROPOL_2018_1955_R1

Title: DEFORMATION AND FAILURE OF SUGARCANE BAGASSE REINFORCED PP

Journal: European Polymer Journal

Dear Dr. Moczo,

I am pleased to inform you that your paper has been accepted for publication. My own comments as well as any reviewer comments are appended to the end of this letter.

Your accepted manuscript will now be transferred to our production department. We will create a proof which you will be asked to check. You can read more about this <u>here</u>. Meanwhile, you will be asked to complete a number of online forms required for publication. If we need additional information from you during the production process, we will contact.

Thank you for submitting your work to European Polymer Journal. We hope you consider us again for future submissions.

Kind regards,

Julius Vancso

Editor

European Polymer Journal

Comments from the editors and reviewers:

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